

Dredging Operations Technical Support (DOTS) Program

Mr. Jeff McKee

HQ Navigation Business Line Manager

Mr. Jeff Lillycrop

Civil Works Technical Director

Mr. Joe Wilson

Program Monitor

Ms. Cynthia Banks

Program Manager

8 April 2015

Navigation RARG Meeting



US Army Corps
of Engineers®

ERDC

Engineer Research and
Development Center



Presentation Outline

- DOTS Overview
- Program Functions/Scope
- FY14/FY15 Technical Responses
- FY15 Technical Activities
- FY15 Strategic Initiatives

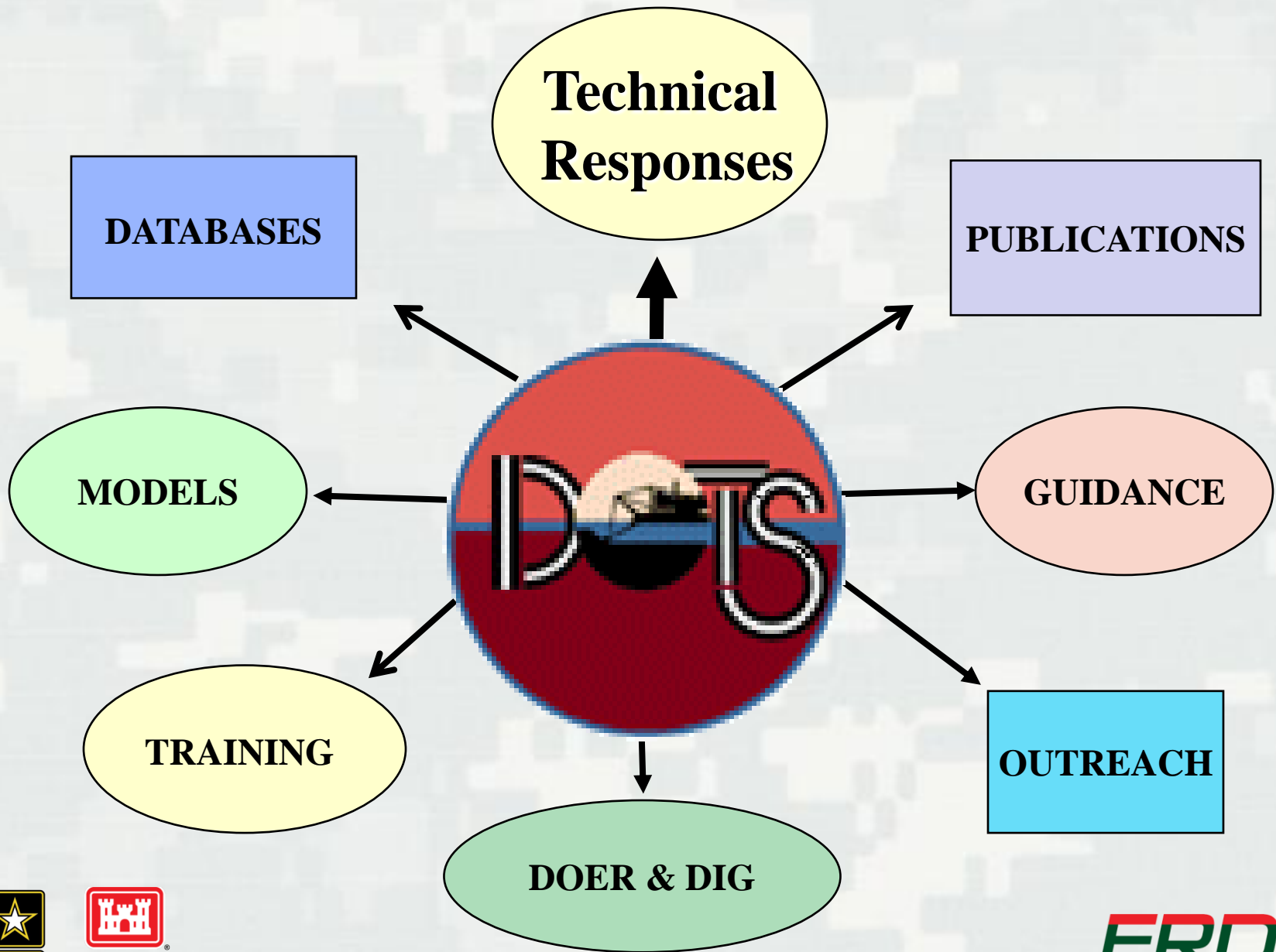


ERDC

DOTS Overview

- Primary technology transfer mechanism for dredging and navigation since 1978
- Provides “one-door-to-the-Corps” access to comprehensive information on technology related to navigation O&M functions
- Program functions include rapid, short-term technical responses for field offices, technology demonstrations, training, database management, publications, and development and dissemination of technical guidance





ERDC

Technology Transfer Scope

Despite “Dredging” in the title -

NOT LIMITED TO DREDGING!

***But Rather to the Broader
Navigation Mission***



USACE Campaign Plan Alignment

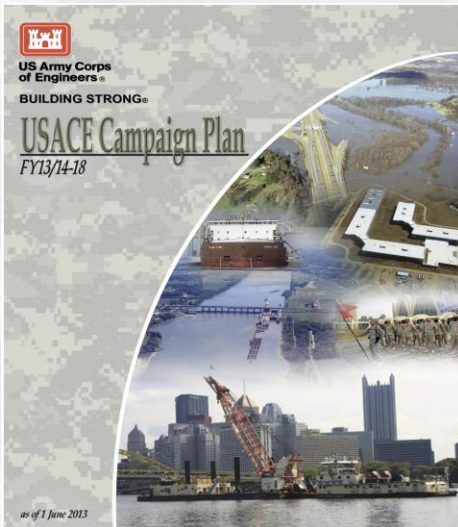
■ Goal 4: *Prepare for Tomorrow*

► Objective 4a

- Action 4a1 – Develop new Science and Technology (S&T)
- Action 4a2 – Improve knowledge creation/sharing and technology transfer
- Action 4a3 – Improve technology infusion policy and innovation

► Objective 4d

- Action 4d1 – Shape the workforce for the future
- Action 4d2 – Increase STEM

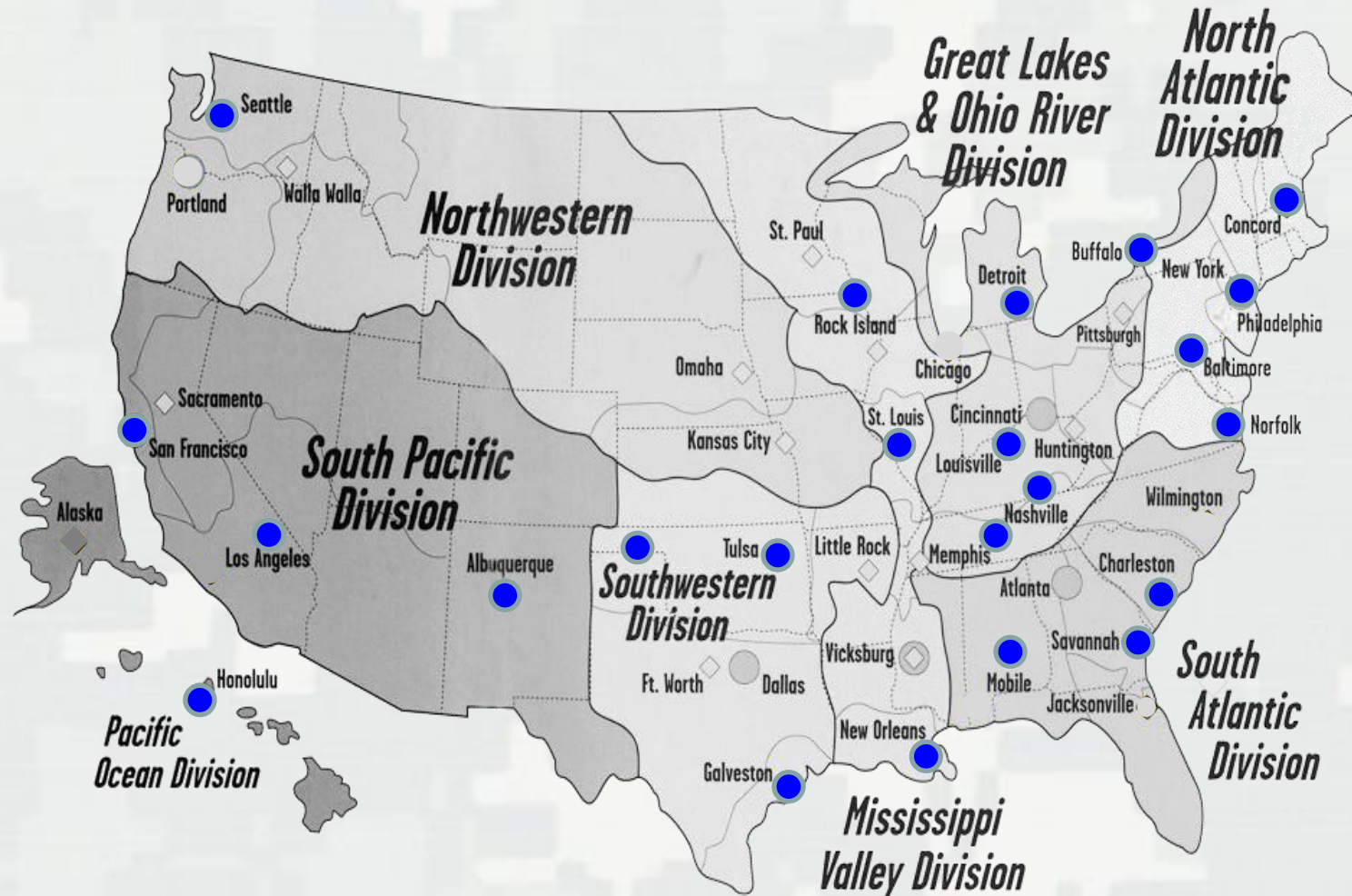


Direct Technical Support

- A response can...
 - ▶ be initiated by submitting a request through the DOTS Tracking System
<http://el.erdcl.usace.army.mil/dots>
 - ▶ consist of up to 2 weeks of scientist or engineer time & travel expenses.
 - ▶ range from a phone call “one stop”, to a technology demo, to a site visit.
 - ▶ result in products such as a technical documents or reviews.
 - ▶ In FY14, 54 technical responses were fielded from 23 Corps Districts.



FY15 Requests = 39



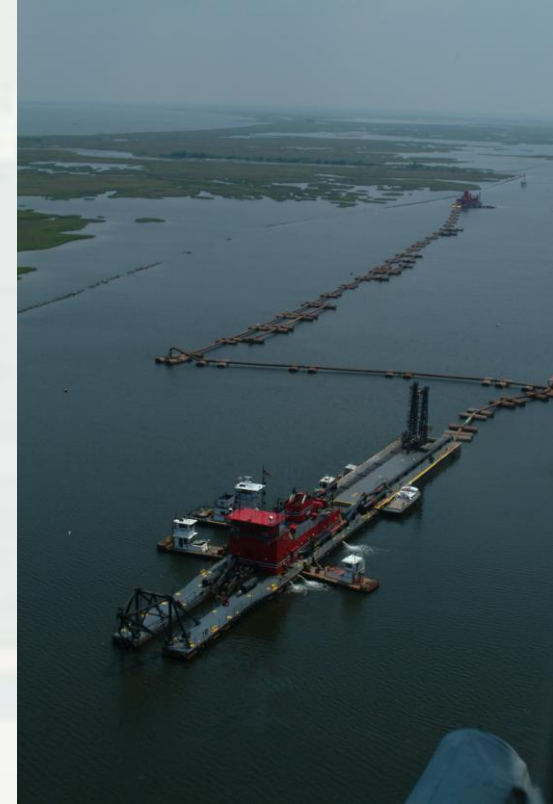
22 Districts / 1 Division



ERDC

Common Trends

- Ship Simulations
- Modeling Support (e.g., STFATE)
- Training Sessions
- Technical Writing Assistance
- One-stop Assistance



Models: ILT Metapopulation

- Purpose: To compare effects of different operational strategies and management treatments on endangered ILT populations below major dams
- Products:
 - ▶ Rangewide ILT Survey
 - ▶ Least Tern Population Dynamics Model
- Outcome: Reduce impact of ILT on dredging program/potential de-listing of ILT



Interior Least Tern

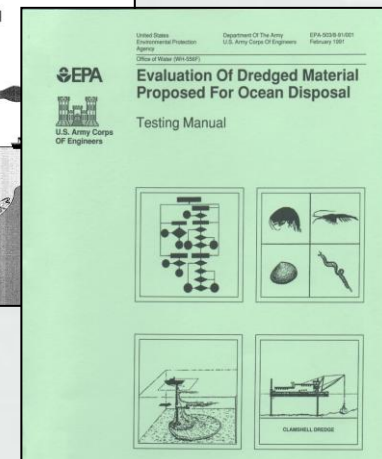
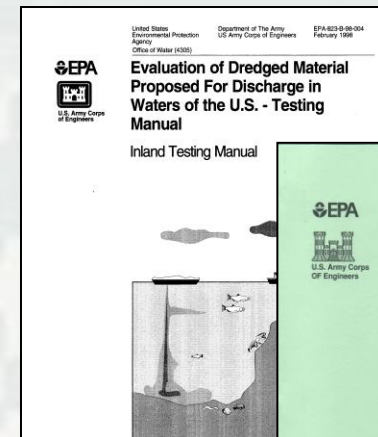




Guidance: ITM/OTM Revision



- Purpose: To update and combine ITM/OTM to include Operations Management and advances in Biological Assessment
- Product: Testing, Evaluation And Management (TEAM) Manual
- Outcome: More focus on cost effective management



Databases: Literature, Ocean Disposal and TES

- Environmental Effects & Dredging and Disposal Literature Database (E2-D2)
- Ocean Disposal Database (ODD)
- USACE Threatened, Endangered, and Sensitive (TES) Species Protection and Management System
 - ▶ TES Cost Accounting Template



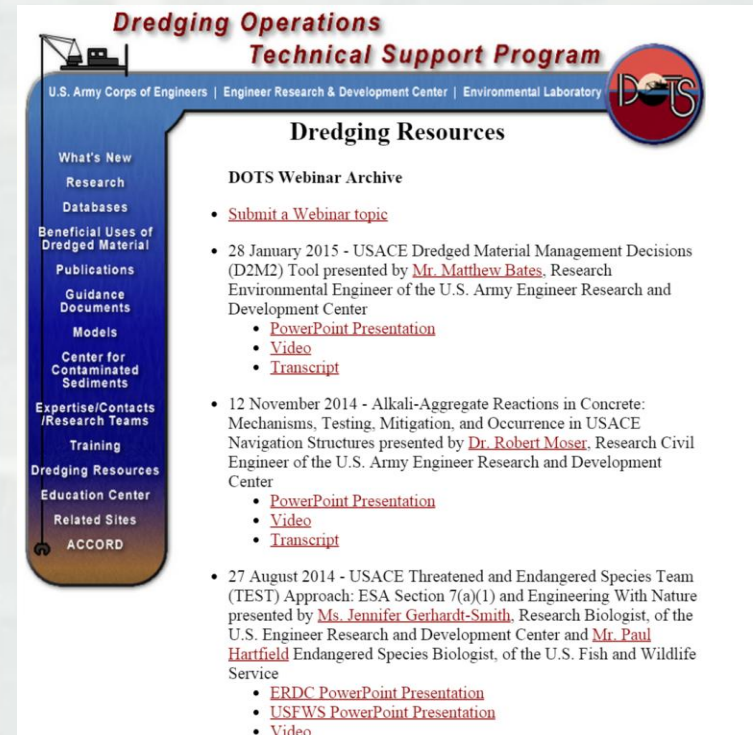
Websites: Thin Layer Placement and Beneficial Use of Dredged Sediments

- An increasing interest in thin layer placement of O&M dredged sediments for environmental enhancement warrants a website to provide information on current placement technology, applications, permitting issues, and case studies



Training: DOTS Web-Based Program

- FY14 Webinars = 10
- Reached 648 Participants
- PDHs are Offered
- 'Submit a Webinar Topic'



Dredging Operations Technical Support Program

U.S. Army Corps of Engineers | Engineer Research & Development Center | Environmental Laboratory

Dredging Resources

DOTS Webinar Archive

- [Submit a Webinar topic](#)
- 28 January 2015 - USACE Dredged Material Management Decisions (D2M2) Tool presented by [Mr. Matthew Bates](#), Research Environmental Engineer of the U.S. Army Engineer Research and Development Center
 - [PowerPoint Presentation](#)
 - [Video](#)
 - [Transcript](#)
- 12 November 2014 - Alkali-Aggregate Reactions in Concrete: Mechanisms, Testing, Mitigation, and Occurrence in USACE Navigation Structures presented by [Dr. Robert Moser](#), Research Civil Engineer of the U.S. Army Engineer Research and Development Center
 - [PowerPoint Presentation](#)
 - [Video](#)
 - [Transcript](#)
- 27 August 2014 - USACE Threatened and Endangered Species Team (TEST) Approach: ESA Section 7(a)(1) and Engineering With Nature presented by [Ms. Jennifer Gerhardt-Smith](#), Research Biologist, of the U.S. Engineer Research and Development Center and [Mr. Paul Hartfield](#) Endangered Species Biologist, of the U.S. Fish and Wildlife Service
 - [ERDC PowerPoint Presentation](#)
 - [USFWS PowerPoint Presentation](#)
 - [Video](#)



Training: Dredged Material Management and Dredging Practices Seminar

- Past Dredged Material Assessment and Management (DMAM) Seminars
 - ▶ San Francisco, 2002
 - ▶ Denver, 2003
 - ▶ Cleveland, 2004
 - ▶ Boston, 2005
 - ▶ Sacramento, 2008
 - ▶ Detroit, 2009
 - ▶ Jacksonville, 2011
- Training Request from SAC (Charleston, 2015)



Strategic Direction

- Continued expansion of technical response support to field offices encountering problematic navigation and dredging issues
- Proactive updating of existing tools and databases to maintain functionality and compatibility with emerging IT requirements
- Vital investments in training of Corps and regulatory agency staff in dredging and other navigation mission processes
- Recruitment strategy (senior/junior researcher pairings)
- Strengthen collaborations/partnership with federal agencies, academia, etc.
- Increase synergy with Navigation R&D Programs



Upcoming Events

WEDA/TAMU Dredging Seminar

Houston, Texas

22-24 June 2015

Dredging 2015

Savannah, Georgia

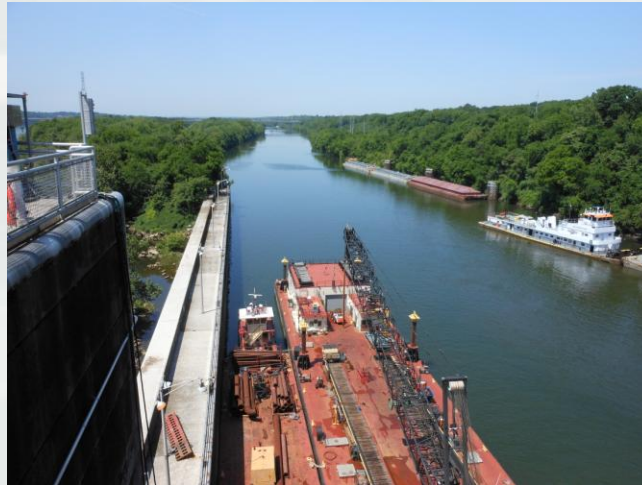
19-21 October 2015



Input from you...

How can DOTS assist you?

[*http://el.erdc.usace.army.mil/dots/*](http://el.erdc.usace.army.mil/dots/)



ERDC